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=> d his

     (FILE 'HOME' ENTERED AT 17:39:52 ON 22 SEP 2005)
     FILE 'CA' ENTERED AT 17:40:00 ON 22 SEP 2005
        E ADAMY S/AU
L1     3 S E4-7 AND 1994/PY
L2  6988 S (CONTOUR OR(3 OR THREE)(2W)DIMENSION?)(7A)(PLOT? OR DIAGRAM OR
         REPRESENT? OR DISPLAY OR GRAPH?)
L3  1179 S L2 AND(PHASE OR W O OR O W OR EMULSI? OR MICROEMULS? OR (WATER OR
         H2O)(1A)OIL OR SUSPENSION)
L4   117 S L3 AND(AUTOMAT? OR COMPUTER OR MICROPROCESSOR)
L5   111 S L4 NOT(COMPRESS? OR MICROPORE OR ORIFICE OR ION CHROMATOG? OR
         CHEMICAL FORMULA OR TOMOGRAPHY OR WAVE FORM OR COMBINATORI?)
L6    81 S L5 NOT(VIRUS OR REFRACT? OR DIGEST? OR MINING OR COLONY OR HOLOGR?
         OR ARTS OR PREDICT? OR DIMER)
L7    72 S L6 NOT(VOID OR POLYANIL? OR YEAST OR PROTEIN OR SOIL OR CYTOPLASM
         OR ENZYM? OR LIGAND OR POCKET OR INTERATOM? OR CEMENT)
L8    56 S L7 NOT(DIFFRACT? OR BIOINF? OR ANNULAR OR POSTING OR CHANNEL OR
         FLAME OR ESTROGE? OR ANNEAL? OR PLANT OR AMYLOID)
L9    61 S L4 NOT L8
L10    1 S L9 AND STYRENE
L11   57 S L8,L10

=> d bib,ab 1-3 l1

L1   ANSWER 2 OF 3  CA  COPYRIGHT 2005 ACS on STN
AN   121:303582  CA
TI   Effects of cosurfactant and oil chain length on phase behavior and
     solubilization in alcohol and glycol ether microemulsions
AU   Adamy, S. T.
CS   Technology Center, Colgate-Palmolive Company, Piscataway, NJ, 08855, USA
SO   Journal of Dispersion Science and Technology (1994), 15(6), 727-48
AB   The phase behavior and oil solubilization capacities of a series of
     model microemulsion systems have been studied. Phase behavior was
     studied in systems composed of NaCl brine, sodium dodecyl sulfate, and
     either 1-butanol, 1-pentanol, ethylene glycol monobutyl ether,
     diethylene glycol monobutyl ether, ethylene glycol monohexyl ether, or
     diethylene glycol monohexyl ether. Longer-chained cosurfactant systems
     exhibit isotropic behavior over smaller compositional ranges. Whereas
     the ethylene glycol monohexyl ether system possessed two sep. isotropic
     microemulsion-type regions, all other systems possessed connected
     isotropic regions. The one-phase regions in the 1-pentanol system,
     however, are connected by a narrow channel. Increasing the degree of
     amphiphilicity in the cosurfactant tends to increase the occurrence of
     liq. crystal phases. The effects of changing the cosurfactant structure
     and the oil chain length in oil solubilization were also analyzed. We
     introduce the method of presenting solubilization data in the form of
     contour plots, and demonstrate the utility of these plots for
     understanding solubilization. It was generally found in both alc. and
     glycol ether systems that lengthening the cosurfactant chain or
     shortening the oil chain tended to increase solubilization and drive the
     systems to be more dependent on the amt. of cosurfactant and less on the
     amt. of surfactant. In the ethylene glycol monohexyl ether system, liq.
     crystals could be formed when octane or dodecane was solubilized and
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high concns. of amphiphiles were present, but not when hexadecane was solubilized. The trends in solubilization were able to be qual. described by Winsor's R ratio anal., which may provide a means of performing direct calcns. to predict behavior in these systems.

=> d bib,ab 1-57 l15

L11 ANSWER 32 OF 57 CA COPYRIGHT 2005 ACS on STN
AN 112:166184 CA
TI **Phase** equilibrium calculations and **three-dimensional computer graphics representation**
AU Nitta, Tomoshige; Ikeda, Kazufumi; Katayama, Takashi
CS Fac. Eng. Sci., Osaka Univ., Osaka, 560, Japan
SO Fluid Phase Equilibria (1989), 53, 105-12
AB An important role of global stability anal. is emphasized for **phase** equil. calcns. to det. the thermodynamically most stable soln. An algorithm used in this work is to find first an outside soln. in the Gibbs energy surface and then to search any inside solns. by means of the bisection search principle. The global stability anal. should also be applied to mixt. crit. points calcd. from the conventional crit. condition. Typical **phase** diagrams are calcd. for binary mixts. including three **phases** (gas, liq. and solid) by using the Soave-Redlich-Kwong equation of state. **Three-dimensional** pressure-temp.-compn. (pTx) **phase diagrams** were displayed on a personal **computer** with functions of rotation, zoom, enlargement and projections on the pT, px and Tx axes.

L11 ANSWER 47 OF 57 CA COPYRIGHT 2005 ACS on STN
AN 98:34972 CA
TI Mathematical treatment of the **emulsification** of benzene and **styrene** in aqueous hexadecyltrimethylammonium bromide-cetyl alcohol mixtures
AU Chou, Y. J.; El-Aasser, M. S.; Vanderhoff, J. W.
CS Emulsion Polymers Inst., Lehigh Univ., Bethlehem, PA, 18015, USA
SO ACS Symposium Series (1982), 197(Comput. Appl. Appl. Polym. Sci.), 399-425
AB **styrene** [100-42-5] Or benzene [71-43-2] mini-**emulsions** of 0.1-0.3 μ diam. were prepd. at 63° using a mixt. of aq. hexadecyltrimethylammonium bromide (I) [57-09-0] and cetyl alc. [36653-82-4]. The most stable **emulsions**, formed at 1:3-1:1 molar ratios, contained cryst., rodlike particles of I and II, 1-2 μ in length and 0.1-0.2 μ in diam. Conductometric titrn. of these optimum systems with **styrene** or benzene gave a near-linear leg descending to an inflection point followed by another near-linear leg ascending to a second inflection point and a near-const. or slowly-decreasing leg thereafter. The descending leg was interpreted as solubilization of the oil in micelles or cryst. complex, the ascending leg as **emulsification** to form tiny droplets which grew by coalescence and diffusion, and the near-const. or slowly decreasing leg to droplet growth by diffusion. The conductometric titrn. curves were expressed by an exponential step function in terms of the initial conductance, the conductances at both inflection points, a solubilization const., an **emulsification** const., and a droplet growth const. Iterative **computer** soln. of this math. model gave a reasonable fit of the different exptl. titrn. curves, and the calcd. parameters were correlated with the I and II concns. to give the distributions of

the **emulsifier** as solute **emulsifier**, micellar **emulsifier**, and **emulsifier** in the cryst. complex. The correlation of **emulsion** stability with the presence of the cryst., rodlike particles allowed a prediction of **emulsion** stability. Finally, a **three-dimensional plot** of conductance as a function of added benzene and II concn. at a given I concn. was calcd. by **computer** curve-fitting and used to visualize the conductance surface at any desired angle.

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=> log y
STN INTERNATIONAL LOGOFF AT 18:12:38 ON 22 SEP 2005

=> d his

     (FILE 'HOME' ENTERED AT 16:22:09 ON 22 SEP 2005)
     FILE 'CA' ENTERED AT 16:22:33 ON 22 SEP 2005
L1 4895 S (3 OR THREE)(2W)DIMENSION?(7A)(PLOT? OR DIAGRAM OR CONTOUR OR
        REPRESENT? OR DISPLAY OR GRAPH?)
L2  359 S L1(10A)(AUTOMAT? OR COMPUTER)
L3   33 S L2 AND(PHASE OR W O OR O W OR EMULSI? OR MICROEMULS? OR (WATER OR
        H2O)(1A)OIL)
L4  228 S L2 AND GRAPHIC?
L5   74 S L4 AND(EXPERIMENT OR DATA)
L6  104 S L3,L5
L7   94 S L6 NOT(COMPRESS? OR MICROPORE OR ORIFICE OR ION CHROMATOG? OR
        CHEMICAL FORMULA OR TOMOGRAPHY OR WAVE FORM OR COMBINATORI?)
L8   71 S L7 NOT(VIRUS OR REFRACT? OR DIGEST? OR MINING OR COLONY OR HOLOGR?
        OR ARTS OR PREDICT? OR DIMER)
L9   43 S L8 NOT(VOID OR POLYANIL? OR YEAST OR PROTEIN OR SOIL OR CYTOPLASM
        OR ENZYM? OR LIGAND OR POCKET OR INTERATOM? OR CEMENT)
L10  32 S L9 NOT(DIFFRACT? OR BIOINF? OR ANNULAR OR POSTING OR CHANNEL OR
        FLAME OR ESTROGE? OR ANNEAL? OR PLANT OR AMYLOID)

=> d l10 bib,ab 1-32

L10  ANSWER 13 OF 32  CA  COPYRIGHT 2005 ACS on STN
AN   115:44115  CA
TI   Investigation of emulgation and emulsion stability of thiocarbamate
     herbicides
AU   Dombay, Zs.; Mogyorodi, F.
CS   North Hung. Chem. Works, Sajobabony, H-3792, Hung.
SO   Proc. Conf. Colloid Chem. Mem. Ervin Wolfram, 5th (1990), Meeting Date
     1988, 106-9. Editor(s): Kiss, E.; Pinter, J. Publisher: Lorand Eotvos
     Univ., Budapest, Hung.
AB   Emulsification and emulsion stability (persistence in time) of
     thiocarbamate herbicides (ethiolate, EPTC, cycloate and butylate) were
     investigated through photometric measurement of turbidity. Influence of
     various parameters was evaluated. Investigations included combined
     herbicidal formulations. Results were analyzed and represented by
     computer in three-dimensional diagrams.

L10  ANSWER 15 OF 32  CA  COPYRIGHT 2005 ACS on STN
AN   114:120915  CA
TI   PlotIT - graphics and statistics in 3 dimensions
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AU Schweim, Harald; Nagel, Klaus
CS Inst. Pharm. Chem., Univ. Hamburg, Hamburg, D-2000/13, Germany
SO Pharmazie in Unserer Zeit (1991), 20(1), 37-41
LA German
AB The personal computer version (1.5) of the **data** processing, statistical evaluation, and **data graphical** display program PlotIT, was critically tested for its applicability for chem.-related **data** processing and representation on an IBM-compatible with a 80386 processor. The program, which is either command- or menu-driven and which enables the 3-dimensional representation of histogram or X/Y/Z plots ("fish net" plots) in addn. to conventional X/Y plots, histograms, or pie charts, performed well; 1 or 2 minor errors were apparent (e.g. default parameters which could lead to a system crash). These are described, together with the various functions of the program. The program requires hardware corresponding to its high std.; this, coupled with its complexity which requires a certain amt. of familiarization probably makes it more suitable for large, rather than small, labs.

L10 ANSWER 20 OF 32 CA COPYRIGHT 2005 ACS on STN
AN 106:127893 CA
TI Modular software-controlled electrochemical system
AU Hagan, D.; Spivey, J.; Niculescu, V. A.
CS Virginia Commonw. Univ., Richmond, VA, 23284-0001, USA
SO Review of Scientific Instruments (1987), 58(3), 468-74
AB A modular microcomputer-controlled 3-electrode potentiostat configured with **graphics** is presented. The system was designed for metallic surface characterization and is capable of performing in different modes of operation including single sweep voltammetry, cyclic voltammetry, and chronoamperometry. An integrated and flexible software system for control, **data** taking, **data** storage, and transfer is described. **Data** anal. software for the IBM-PC **computer** including 2- and **3-dimensional plotting** as well as menu-driven theor. modeling, simulation, and curve fitting was developed.

L10 ANSWER 24 OF 32 CA COPYRIGHT 2005 ACS on STN
AN 103:148098 CA
TI **Three-dimensional** PTx **phase diagrams** through interactive **computer graphics**
AU Charos, Georgios N.; Clancy, Paulette; Gubbins, Keith E.; Naik, Chandrashekhar D.
CS Sch. Chem. Eng., Cornell Univ., Ithaca, NY, 14853, USA
SO Fluid Phase Equilibria (1985), 23(1), 59-78
AB Interactive computer graphic techniques were developed for the display of binary mixt. **phase** diagrams. The diagrams are defined in temp.-pressure-compn. space, and are pictured as wireframe objects with depth perception in order to provide a three-dimensional effect. The displays used were vector refresh workstations whose transformation hardware allows real-time rotation, rescaling, and translation of the diagrams, while software allows the extn. of const. property Px, Tx, PT, and x-y plots. The equil. surfaces and the crit. lines were calcd. by using the Redlich-Kwong equation of state and its Soave modification.

=> log y

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